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Why voluntary municipal merger projects fail: evidence from popular votes in Switzerland

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Abstract

What determines the failure of local government amalgamation referenda? Existing research suggests that functional pressures act as a push factor towards local territorial reform, whereas considerations of political self-determination exert a pull effect. However, we know little about the respective importance of these countervailing forces. In this paper, I analyze popular vote decisions on mergers of 541 municipalities involved in 166 different merger projects in three Swiss cantons since the new millennium. The results show that both functional pressures and concerns for self-determination are linked to popular vote outcomes: small municipalities are less likely to reject a merger. Concerns for self-determination matter, but only when the pressures of smallness are not overwhelming: a higher vote share of right-wing parties and a preponderance of other municipalities in the merger coalition increase the probability that voters reject a merger project. This has implications for policy-makers' strategies when drafting and promoting voluntary local amalgamation reforms.

1. Introduction

Local government mergers always lead to the dissolution of at least one municipality and to the alteration of at least two of them. This redrawing of local boundaries can face considerable opposition from affected constituencies. In most countries this resistance remains toothless, however, because local government mergers are implemented top-down by higher government tiers (e.g. in Denmark, Germany, Sweden and the United Kingdom) (Baldersheim and Rose 2010a). For this reason, we know rather little about when these reforms are contested by local constituencies and the reasons why they reject local government merger projects (but see Hanes, Wikström and Wångmar 2012).

A viable starting point to answer this question is the postfunctionalist theory of governance. In a nutshell, it states that territorial reforms are triggered by functional pressures for efficient governance but that they are met with resistance when they concern a community's desire for self-determination: when functional pressures and concerns for self-determination collide, the latter will be stronger according to this theory (Hooghe and Marks 2016). Existing empirical research on outcomes of municipal merger referenda shows that both functional considerations – potential tax benefits resulting from consolidation or improvements in public services – and concerns for political self-determination – fear of losing political control in the new entity –affect voters' willingness to accept local territorial reforms (Marando and Whitley 1972; Austin 1999; Brink 2004; Miyazaki 2014). However, we know little about the relative importance and the interplay of functional pressures and concerns for self-determination in municipal

merger referenda. In this paper, I assess how these factors are linked to local constituencies' decisions at the ballots.

Three Swiss cantons[1] provide the empirical basis for this endeavor. Swiss municipal mergers are not enforced by higher government tiers but the result of bottom-up coalition formation processes by local governments. The affected voters have the final say on whether a merger project initiated by their local representatives is implemented or not: popular votes in each involved municipality determine the fate of the merger project. This setting allows for an analysis of the conditions under which citizens accept or reject a merger.

The quantitative analysis of popular vote decisions in 541 municipalities shows that both functional pressures and concerns for self-determination matter. However, it seems that only when functional pressures for reform are below a certain threshold, concerns for self-determination become relevant for voters' decisions. This has implications for the postfunctionalist theory of governance and for policy-makers' strategies in merger reforms.

2. Voluntary Municipal Mergers in Switzerland

Voluntary municipal mergers are a rather rare phenomenon. In most countries that experienced a large-scale territorial reform of the local government landscape, national or regional government tiers implemented these reforms top-down (Baldersheim and Rose 2010a). However, since the new millennium, voluntary municipal mergers have become

[1] Cantons are the important intermediate government tiers between the local and the national level in Switzerland.

more frequent. For example, Finland, Japan, and Switzerland have witnessed heightened voluntary merger activity, leading to a sizable reduction in the number of local governments. In these countries, national or regional government tiers provide financial incentives for their local governments to merge (Kaiser 2014; Saarimaa and Tukiainen 2015; Weese 2015). Other countries also experienced voluntary mergers, albeit to a lesser extent. In the Netherlands, the substantial reduction of municipalities in the last 15 years was partly due to voluntary mergers (Allers and Geertsema 2016, 665), the few Norwegian municipalities involved in merger projects held local referenda on them (Baldersheim and Rose 2010b, 91) and even French municipalities start to engage in voluntary mergers (Pasquier 2017). In sum, while remaining rather rare compared to top-down mergers, voluntary bottom-up mergers have become more widespread in the last 20 years.

However, not all voluntary merger projects are implemented. A substantial amount of them fails to survive a popular vote. Consider the example of the United States: voluntary municipal mergers in the US predominantly take the form of city-county consolidation. Norris (2015, 113–18) reports a total of 150 city-county consolidation votes between 1947 and 2010, only 32 of which were successful. It is thus important to understand under which circumstances local constituencies are opposed to merger projects.

Swiss municipal mergers are ideal research objects for studying this question, because Swiss citizens have the final say on municipal merger projects in local referenda. Local government in Switzerland is strong both in functional and in political terms and plays an important role for citizens as service provider, but also as a focal point for

identification and political participation (Hesse and Sharpe 1991, 607). Therefore, mergers can be a highly contested issue. The three Swiss cantons studied here have experienced a substantial reduction in municipality numbers since the new millennium compared to the average Swiss canton (see Figure B.1 in the Online Appendix).

Table 1: The Three Cantons in the Swiss Context

	BE	FR	VD	Swiss Cantons			
				Mean	P25	P50	P75
N Municipalities	400	245	384	111	22	81	169
Inhabitants/Municipality	2,358	945	1,604	5,594	1,757	2,573	4,631
Population	979,802	278,493	713,281	302,698	70,032	220,533	377,610
Inhabitants/km2	167.74	174.73	252.69	481.61	90.93	229.17	322.94
% Urban Population	62.57	55.75	74.67	60.85	49.82	66.37	87.71
Municipality Types							
% Urban	13.96	11.02	17.15	27.61	13.96	22.16	35.71
% Periurban	38.17	54.41	63.11	34.81	18.07	36.15	54.41
% Rural	47.86	34.56	19.74	37.58	20.76	31.67	51.25

Note. Data Source: Federal Statistical Office (2012, 2017); Data for year 2010; N Municipalities and Inhabitants/Municipality for year 2000.

Moreover, these three cantons had a rather fragmented local government landscape in 2000 compared to the average Swiss canton; they also had a much higher number of local governments (Table 1). In Fribourg and Vaud the mean local population size was below the 25th percentile of the average Swiss canton and in Bern it ranged in between the 25th percentile and the median of the other Swiss cantons. Apart from their fragmented local government landscape, the three cantons vary with respect to other features as well. Bern and Vaud are among the largest Swiss cantons, while Fribourg neatly represents the average. Population density and the percentage of urban population range below the median in Bern and Fribourg and above it in Vaud. Finally, different municipality types are present to varying degrees in the three cantons. In Bern, almost

half of the municipalities are rural, while in Fribourg and Vaud, more than half and almost two-thirds, respectively, belong to the periurban type.[2]

It is important to note that the municipalities involved in municipal mergers in the three cantons do not make a random sample and are not representative of Swiss municipalities in general – especially not in terms of population size and density. This is a potential challenge to external validity. Yet, the aim of this paper is not to infer to municipalities in general, but only to municipalities involved in merger processes. In that respect, the selected cantons provide a good starting point: like in Switzerland as a whole, municipal merger projects in the three cantons predominantly involve smaller municipalities in a suburban and rural context.

Swiss cantons play an important role in triggering municipal mergers. While they don't force local governments to merge, cantons encourage municipal mergers through lump-sum payments and administrative assistance. The former is an almost necessary precondition for municipal mergers (Kaiser 2014). While cantons induce merger projects through financial incentives, they don't exert additional control over whether merger projects are accepted or rejected by local constituencies.[3] The latter decide autonomously in local referenda whether they want to implement a merger project initiated by their local representatives or whether they prefer their municipality to remain independent. The three cantons studied here all provide financial incentives to merge. The rules for

[2] Periurban municipalities are located at the outskirts of urban areas and exhibit both urban and rural elements (Federal Statistical Office 2012).

[3] For the distinction between merger initiation, normally by local representatives, and merger decision by the affected constituencies, see Strebel (2018).

obtaining and the formulas for calculating financial incentives are almost identical across the three cantons.[4]

In sum, these three cantons are suitable cases for a study of why voluntary municipal merger projects fail. First, they all exhibit a high number of municipal merger projects since the new millennium, facilitating a quantitative study of merger decisions. Second, they represent typical contexts in which Swiss municipal mergers take place. Finally, they all use very similar systems to incentivize voluntary municipal mergers.

3. Push and Pull Factors in Municipal Merger Referenda

Scholars analyzing the determinants for municipal mergers commonly distinguish between factors that *push* a municipality towards a merger and factors that *pull* a municipality away from it. The former can be conceived of as functional pressures – such as smallness or financial difficulties – driving municipalities towards a merger, while the latter revolve around questions of self-determination and local identity (Austin 1999; Steiner 2003; Calciolari, Cristofoli, and Macciò 2013; Hyytinen, Saarimaa, and Tukiainen 2014).

Most existing studies analyze whether a municipality merged or not and how these factors are associated with that outcome. Very few studies distinguish between municipalities that merged successfully and those that *attempted* to merge but failed to do

[4] The details of the three incentive systems are presented in Appendix A.

so because a (local) veto player rejected the project. As a consequence, we don't know under which conditions voters accept or reject a merger project at the ballots.[5]

A second shortcoming of existing research is that it remains silent about the relative importance and the interplay of functional pressures and concerns for self-determination. In their seminal postfunctionalist theory of governance, Hooghe and Marks (2016) argue that the scale at which a certain public service is produced is the result of a functionalist push and a communal pull. The push consists in the attempt to produce public services at the optimal scale to be most cost-efficient and effective. The pull comes from communities' desire to control decision-making in certain policy areas. When the functional push and the communal pull collide, so the argument goes, the communal pull will be stronger: communities are eager to preserve their self-determination in areas and on issues that are important to them. Do concerns for self-determination override the importance of functional pressures in referendums on territorial reform as suggested by Hooghe and Marks (2016)? Or are functional pressures more salient for voters' decisions on municipal mergers?

In the remainder of this section, I present hypotheses on the role of these push- and pull factors for voters' decision on municipal mergers in legally binding popular votes.

[5] Exceptions are the studies by Calciolari, Cristofoli, and Macciò (2013) and Strebel (2018) for Switzerland and Miyazaki (2014) for Japan. All of them include failed merger projects in their analysis of merger determinants.

3.1 Functional Pressures

The main argument in favor of municipal mergers presented by amalgamation advocates is that mergers allow municipalities to benefit from scale economies (Steiner 2003, 555). For certain public goods, unit costs can be lowered with production at a larger scale (Bikker and Van der Linde 2016). A merger would thus allow municipalities to save costs (Steiner and Kaiser 2017). Recent research has cast serious doubt on this argument, however. Blom-Hansen et al. (2016) convincingly argue and empirically demonstrate that scale effects are not to be expected after a municipal merger.[6] However, what is relevant here is not so much whether the argument on scale economies is objectively correct, but how municipal mergers are presented in public discourse, since this is (part of) what voters ultimately base their decision on. In the Swiss discourse on municipal mergers, the argument is very prominent among merger advocates and might thus have a profound influence on local constituencies' decisions: Local representatives of a municipality involved in a merger will likely use these arguments in favor of a merger that they co-initiated – in case the argument fits the situation of their municipality.

Two kinds of municipalities are particularly likely to be convinced by this argument: poor and small ones. Poor municipalities can face substantial difficulties in maintaining decent public service levels. They might perceive amalgamating as a viable way out of this situation. Empirically, this contention is corroborated by studies on municipal-level merger determinants. Calciolari, Cristofoli, and Macciò (2013) for the

[6] Moreover, scale economies can be achieved not only through municipal mergers, but also through inter-municipal cooperation schemes in different policy domains (Steiner 2003).

Swiss canton of Ticino and Saarimaa and Tukiainen (2014) for Finland find that poor municipalities are more likely to merge. Small municipalities can face pressures similar to poor ones. The unit costs of production for certain services – especially for capital-intensive goods such as power, water and waste disposal – are particularly high in very small municipalities. Small municipalities might thus be very tempted to respond to the call of scale economies. This is confirmed by the few existing studies. For the Swedish local government reform in 1952, Hanes, Wikström and Wångmar (2012) find that small municipalities complain less to the central government about forced mergers. In a study of mergers in the Swiss canton of Fribourg, Strebel (2018) shows that small municipalities have a higher probability of both initiating and successfully completing merger projects. Finally, studying merger referenda in Japan, Miyazaki (2014, 402) finds projected efficiency gains to be associated with a higher vote share in favor of a merger. When deciding on a municipal merger, local constituencies are exposed to the prevailing discourse on scale economies and municipal mergers and might act accordingly. We can thus expect that:

H_{1a}: Rich municipalities are more likely to reject a merger project.

H_{1b}: Large municipalities are more likely to reject a merger project.

3.2 Concern for Self-Determination

A prominent argument against large polities is that citizens' opportunities to make their voices heard are smaller (Dahl and Tufte 1974, 13–15). Indeed, recent empirical studies report consistently negative effects of municipal mergers on citizens' feeling of internal political efficacy (Lassen and Serritzlew 2011), their trust in local government (Hansen

2013) and their participation in local elections (Koch and Rochat 2017). Municipal mergers thus seem to profoundly shake up existing local communities. This is particularly problematic for communities more concerned with self-determination.

Here, I discuss three factors that can capture concerns for self-determination: the vote share of right-wing parties, cohesion of the local community, and a municipality's population share in the merger coalition. Hooghe and Marks (2016) use ethno-nationalist parties' vote shares as a proxy to grasp the salience of the desire for self-determination among subnational communities. These TAN parties[7] usually mobilize against the centralization of policy-making and the integration of political communities – at different territorial scales (Mazzoleni 2005). TAN parties hence also tend to oppose municipal mergers. We would thus expect that in municipalities with a high vote share for TAN parties, local self-determination is more salient for local constituencies. In addition, a higher TAN party vote share indicates stronger mobilization potential against a municipal merger and antagonistic campaigns fall on more fertile soil.

H_{2a}: Municipalities with a higher TAN vote share are more likely to reject a merger project.

The cohesion of local communities might influence the probability of rejecting a merger as well. Local communities with strong social networks and with residents actively engaged in local matters are likely to be more concerned with local autonomy and independence (Marcal and Svorny 2000, 100). It is difficult to capture the strength of

[7] TAN stands for traditionalist/authoritarian/nationalist ideology. It constitutes one extreme of the so-called 'new politics' cleavage. The other extreme is the GAL (green/alternative/liberal) ideology (Hooghe, Marks, and Wilson 2002).

social networks and local engagement via official statistics. An indicator associated with having strong local ties and feeling attached to the local community is residence duration and migration experience (Kasarda and Janowitz 1974). The longer individuals reside in a certain place, the more they establish a bond with it (Lewicka 2011). This individual-level logic can also be transferred to the aggregate level of the local community. The more the local population changes, the more difficult it is to sustain a vibrant associational life and stable local networks. New residents first need to familiarize with the local community and cannot readily replace longer-term residents who have left. Hence, in municipalities with a high share of incoming and outgoing migrants, local social networks and community ties are likely to be weaker. For referenda on municipal mergers, it is likely that such municipalities are less opposed. They have less to lose in terms of a vibrant local community life which might be stirred up by a municipal merger.

H_{2b}: Municipalities with low population fluctuation are more likely to reject a merger project.

Finally, the relative size of a municipality in a merger coalition might matter for local communities' decisions. In municipalities making up a large part of a merger coalition, voters probably won't be too concerned about losing political influence in the new municipality. For small partners, however, a merger means a substantial loss of control and self-determination. They become the minority in the new municipality and risk that their interests are given less consideration, since local representatives have an incentive to base their electoral success on the majority's interests (Jakobsen and Kjaer 2016).

H_{2c}: The lower a municipality's share of a merger project's overall population, the more likely it is that it will reject the merger.

3.3 Alternative Explanations

3.3.1 Economic and Political Homogeneity

A prominent explanation for municipalities merging behavior *with one another* is their degree of similarity with respect to economic and political factors (Bhatti and Hansen 2011; Saarimaa and Tukiainen 2014; Bruns, Freier, and Schumann 2015).

The relative economic well-being of a municipality, compared to its project partners, is a first factor that can have an impact on local constituencies' decisions. Economic homogeneity matters 'since no municipality would accept a partner in a substantially worse position than themselves' (Bhatti and Hansen 2011, 220). In Switzerland, resource disparities among merger partners are a salient issue in local debates on municipal mergers. We can expect citizens to be more critical of a merger when its project partners are less well off.[8]

In addition, local constituencies might prefer to merge with municipalities in which voters have similar preferences. Then it is more likely that their policy preferences

[8] The literature on common-pool problems in the course of merger processes also deserves brief attention here: Municipalities involved in mergers often engage in last-minute spending before the merger is implemented. The rationale for doing so is that the accumulated debt will be taken over by the new municipality and hence free-riding on the common pool of the future municipality is possible (Hinnerich 2009). In the present analysis, I don't take this common-pool problem into account, since the last-minute spending normally only starts *after* the decision to implement the merger has been taken (Saarimaa and Tukiainen 2015). In the case at hand, municipalities are one step prior to this stage. Starting to overspend their budget, assuming that the merger will pass at the ballots when it might not, would thus be a very risky strategy.

are also respected after a merger. Existing studies confirm this idea. Bruns, Freier, and Schumann (2015) show that the higher the vote share of the dominant party in a Brandenburg merger coalition, the more likely this coalition is to merge voluntarily. Similary, Saarimaa and Tukiainen (2014) show that Finnish municipalities in which the median voter is further from the coalition average are less likely to accept a municipal merger and that voters in merged municipalities tend to concentrate their votes on local candidates from their part of the municipality – especially when they might be overruled by the rest of the municipality (Saarimaa and Tukiainen 2016).

3.3.2 Financial Incentive

Another important factor is the financial incentive that the cantons provide for municipal mergers. The lump-sum payment municipalities receive in case a specific merger project is accepted in the popular vote is fixed and can be calculated in advance according to the formula laid down in cantonal legislation.[9] As a consequence, local constituencies involved in a merger project know exactly how much money they would receive per capita if a merger is accepted in the popular vote. It is thus conceivable that local constituencies from municipalities involved in merger projects with higher per capita contributions from the canton are more likely to accept a merger.[10]

3.3.3 Merger Experience, Merger Partners and Local Institutions

[9] The formula for calculating the financial incentive for merger projects in the three cantons is presented in Appendix A.

[10] Weese (2015) provides an extensive analysis of the impact of the national government's financial incentives on voluntary municipal merger activity in Japan. He shows that the intensity of the financial incentive is positively linked to merger probability among Japanese municipalities.

A municipality's merger history might also matter for its constituency's decision to merge or not. Some of the municipalities in the dataset have merged more than once since the new millennium and others have started a new attempt after a first attempt failed. Previous merger project experience might affect later popular vote decisions. For example, municipalities with a failed attempt might exhibit a lower rejection probability than municipalities whose previous attempts succeeded or that never attempted to merge before, since local representatives would probably not advocate participation in a new merger project when they know that their voters are firmly opposed to it.

A second factor that might matter for local constituencies' decision is the number of municipalities involved in a merger project. If a merger involves more than two municipalities, this might generate opposition, since finding agreements with several municipalities can be more challenging and citizens' might perceive their voice in this process to be significantly lower than when they merge with one municipality only (Hanes, Wikström, and Wångmar 2012, 2742).

Finally, Swiss municipalities vary with respect to an important institutional feature, namely whether their legislative organ consists of elected representatives, i.e. a parliament, or whether legislation is done by a municipal assembly in which all enfranchised citizens can participate. This distinction is important for two reasons. First, in assembly municipalities, the merger decision is taken in the assembly, whereas in parliament municipalities it is taken at the ballot box. In the former case the vote is directly preceded by a public discussion among voters and representatives, whereas no such discussion takes place in parliament municipalities. Parliament municipalities might have a higher rejection probability, since there is no possibility for local representatives

to convince opponents face-to-face. Second, however, parliament municipalities might be better at integrating different interests at an early stage, since more diverse factions are involved through the parliament, than in assembly municipalities where local executives dominate the process. This would mean that municipal merger projects are more successful at the ballot box than in the municipal assembly.

4. Data, Operationalization and Estimation

4.1 Data and Operationalization

The dependent variable of interest in this study is whether voters in a municipality involved in a merger project reject the merger in a popular vote or not. The data is obtained from the municipality departments of the three cantons (Department of Municipalities Bern 2017; Department of Municipalities Fribourg 2017; Department of Municipalities Vaud 2017). Table 2 gives an overview of the dependent variable across the three cantons. On average, 14.6% of the municipalities involved in a merger project rejected it in the popular vote. In Bern, this number is higher (20.6%), while in Fribourg (11.7%) and in Vaud (13.9%) it is lower.

Table 2. Dependent Variable: Merger Rejection by Canton (2000-2017)

	Accepted	Rejected	Total
Bern	108 (79.4)	28 (20.6)	136 (100)
Fribourg	211 (88.3)	28 (11.7)	239 (100)
Vaud	143 (86.1)	23 (13.9)	166 (100)
Total	462 (85.4)	79 (14.6)	541 (100)

Note. Percentages in parentheses.

A merger project can only be implemented, if all involved municipalities accept it in the referendum. Out of the 166 merger projects, 50 could not be implemented because

they got rejected by at least one involved municipality. 19 of those projects were rejected by more than one of the participating municipalities and in 8 of them, more than half of the municipalities rejected the merger project. A possible concern for the analysis is that decisions in one municipality might affect decisions in other municipalities of the merger coalition. Fortunately, in the cases at hand, popular votes on municipal mergers are held at the same time in all the municipalities of a merger coalition – precisely to prevent such influence.

The data for the independent variables also stems from the three cantons' municipality departments. Unless otherwise stated, the indicators are measured one year prior to the merger vote to make sure they predate the merger decision.[11]

The *financial situation* of a municipality is measured by two indicators. Debt/capita, referring to a municipality's net debt (when positive) or its net assets (when negative), captures the municipality's current economic situation whereas the municipal tax rate approximates the municipality's structural condition over the longer run. Less well-off municipalities tend to have higher municipal tax rates. Municipal *size* is measured by its population. A logarithmic transformation is applied to normalize the distribution of this indicator.

The *TAN vote share* is operationalized through the vote share of the right-wing Swiss People's Party (SVP) in the last national parliamentary elections predating the merger decision. I use the vote share in national elections because it ensures

[11] Descriptive statistics for these indicators can be found in Table B.1 (Online Appendix).

comparability across municipalities. Not all municipalities in the three cantons have local parliaments – in some of them, especially the smaller ones, citizens' assemblies constitute the legislative branch – so we would have to rely on elections of local executives, which are subject to very different dynamics across municipalities. *Population fluctuation* is measured by the sum of immigrants and emigrants in a municipality in a given year divided by its population size. Finally, *population ratio* corresponds to the population size of municipality divided by the population size of the merger coalition.

The *relative economic well-being* of a municipality is operationalized by two indicators. Both the tax rate difference and the debt/capita difference are calculated by subtracting the mean value of the merger coalition from the value of municipality *i*. Positive values for the tax rate difference thus indicate that municipality *i* has a higher tax rate than the mean (and might thus benefit from a tax reduction as a result of a merger), while negative values for the debt/capita difference mean that municipality *i* is better off than the average municipality in the merger coalition (and might have to take on debt from other municipalities as a result of a merger). Political homogeneity is operationalized with two indicators, capturing two dimensions of political competition – an economic left-right and a cultural liberal-communitarian dimension (Hooghe, Marks, and Wilson 2002). The economic dimension is operationalized by the difference in the social democratic party vote share of municipality *i* compared to the mean of the merger coalition and the cultural dimension is operationalized by the same difference in the TAN vote share. Again, the data comes from national elections to ensure comparability across municipalities. Finally, the *payment per capita* municipality *i* would receive from the

canton in case the merger is implemented is calculated according to the formulas reported in Appendix A.

4.2 Estimation

To test the hypotheses formulated in Section 3, I rely on multilevel logistic regression. Logistic regression accounts for the dichotomous nature of the dependent variable. Furthermore, multilevel modeling is needed due to the hierarchical nature of the data. The unit of analysis is the individual municipality. However, individual municipalities in the dataset are nested in higher-order structures in three different ways. First, municipalities involved in the same merger project might share certain unobserved features which might influence local constituencies' decision to reject a merger in a popular vote. Second, municipalities located in the same canton are subject to the exact same higher-tier institutional context while municipalities from different cantons are not. Finally, municipalities are not only nested in merger projects and cantons but also in time periods. It might be that there is a temporal dynamic to the rejection of municipal mergers, e.g. that merger projects at the beginning of the new millennium were more likely to be rejected than later ones.

The first hierarchical relationship – municipalities nested in merger projects – is accounted for through the random intercepts of the multilevel model (Hox 2010, 11). To deal with the second and the third hierarchy, I have to rely on fixed effects – i.e. the inclusion of canton- and time-period dummy variables – because of the small number of higher-level units, which does not allow for the use of further levels in the multilevel regression model.

5. Results

How important are functional pressures and concerns for self-determination for our understanding of local constituencies' decisions in merger referenda?

Figure 1 shows average marginal effects of the different predictors derived from three different multilevel logistic regression models.[12] The first one only includes the factors measuring functional pressures, the second one only the factors associated with self-determination and the third one includes both sets of indicators as well as the alternative explanations.[13] The results suggest that the fiscal indicators – debt/capita and tax rate – are not linked to the probability of rejecting a merger, neither in the functional pressures-only nor in the full model. We can thus reject hypothesis H_{1a}.

The other coefficients exhibit an interesting pattern. In the respective submodels they are substantively smaller – and the three indicators for self-determination are not statistically significant. However, in the full model, these coefficients all become more sizable and statistically significant. Here, a change from the 10^{th} to the 90^{th} percentile in population size – corresponding to an increase of 2'100 inhabitants – is associated with a

[12] A comparison of mean differences at the level of the individual municipality and at the level of the merger coalition can be found in Tables B.2 and B.3 in Online Appendix B.

[13] Alternative explanations are not very relevant for understanding merger rejection, except for the tax rate difference and for having been involved in a failed merger project prior to the current one. The probability of rejecting a merger decreases by 26 percentage points when moving from the minimum to the maximum value of the tax rate difference. And for municipalities with a failed merger attempt the probability to reject a merger lies 10 percentage points lower compared to those without prior merger attempts. Merging with more than two municipalities and having a parliament are significantly associated with merger rejection, but only when population size is not included in the model (models (4) and (5)). The canton- and time-period fixed effects are all insignificant (see Table B.4 in Online Appendix B). To test the robustness of the findings under alternative specifications, I have estimated linear probability models, logistic regression models with standard errors clustered by merger coalition, and logistic regression models with robust standard errors. The substantive results remain the same across all these specifications (see Tables C.1, C.2, and C.3 in Online Appendix C).

37 percentage points increase in local constituencies' probability of rejecting a merger in the popular vote, holding all other variables constant at their mean. The same change in TAN vote share – corresponding to a 30 percentage point vote share increase – is linked to a 18 percentage point increase in rejection probability. When population fluctuation increases from 10th to 90th percentile – 15 percentage points increase in fluctuation – rejection probability still decreases by 8 percentage points, and when population ratio changes from 5 to 75 percent, the probability of rejecting a merger decreases by 27 percentage points.

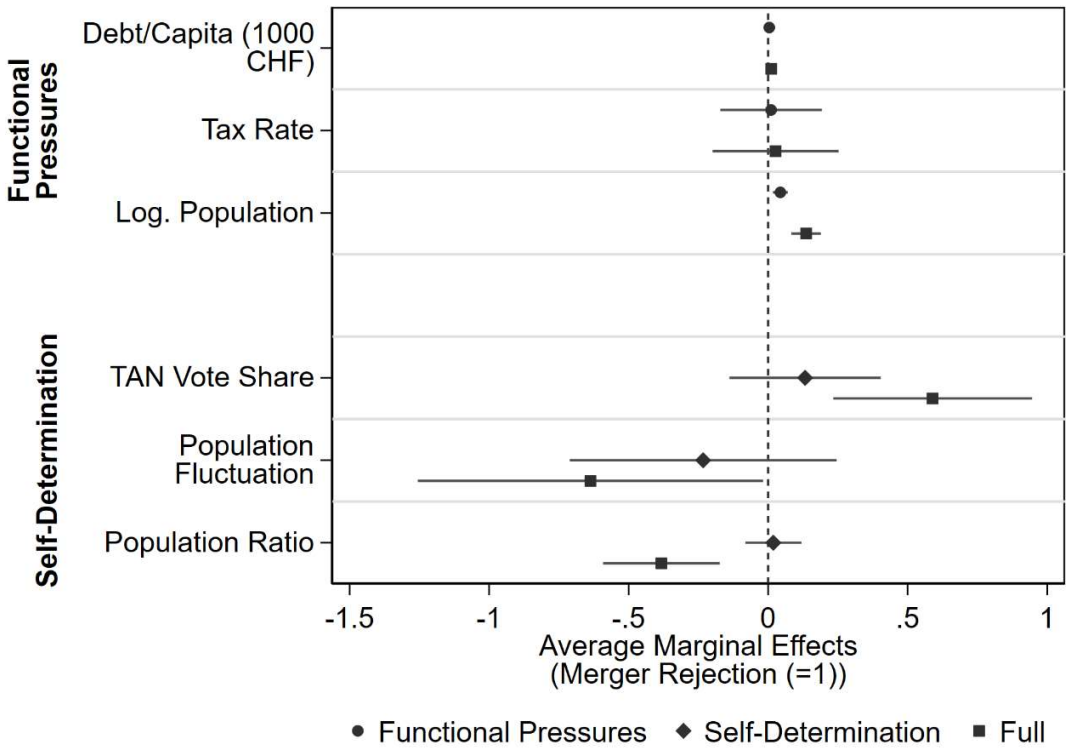

Figure 1. Coefficient Plot: Functional Pressures and Self-Determination
Note. Predicted probabilities are based on multilevel logistic regression models (1), (2), and (6) from Table B.4 (Online Appendix); all other variables are held constant at their mean.

In the full model, we thus find support for hypotheses H_{1b}, H_{2a}, H_{2b}, and H_{2c}. Yet, it remains puzzling why we find these effects only in the full model, but not in the submodels. In what follows, I explore this issue further.

The encountered pattern clearly points to the relative importance of functional pressures and self-determination – or rather to certain conditions under which they are more or less relevant. The most plausible explanation for this pattern is that these variables only exert an effect on a subgroup of municipalities and not among all of them. But what subgroups should we look at? Figure 1 suggests that small and large municipalities should be assessed in more detail, because the effect of population size also becomes larger in the full model. Testing the full model with and without the population size variable confirms this assumption: the effects of the three indicators for self-determination become stronger, once population size is included in the model.[14]

To explore this conjunction between a municipality's population size and the the self-determination indicators further, I have estimated predicted probabilities of the three self-determination indicators for small (10^{th} percentile) and large (90^{th} percentile) municipalities, holding all other variables constant at their mean. The results suggest that the effects of TAN vote share, population fluctuation, and population ratio are much more pronounced among large municipalities (Figure 2). For small municipalities, the rejection probability is never higher than 6%, irrespective of the values of the three self-determination variables. For large municipalities, the rejection probability is much higher – reflecting the direct effect of population size. In addition, however, we can see that the

[14] See model (5) in Table B.4 (Online Appendix).

difference in rejection probability between municipalities with a low and a high TAN vote share, population fluctuation, and population ratio is much higher among large municipalities. For the TAN vote share and the population ratio, these differences are statistically significant with 95% confidence. This suggests that concerns for self-determination matter for voters' decisions in larger municipalities only – where the functional pressures of smallness are less pertinent. It seems that, once these pressures are less strong, concerns for self-determination become very important. The results here suggest that they can be decisive for the success of a merger project in large municipalities.

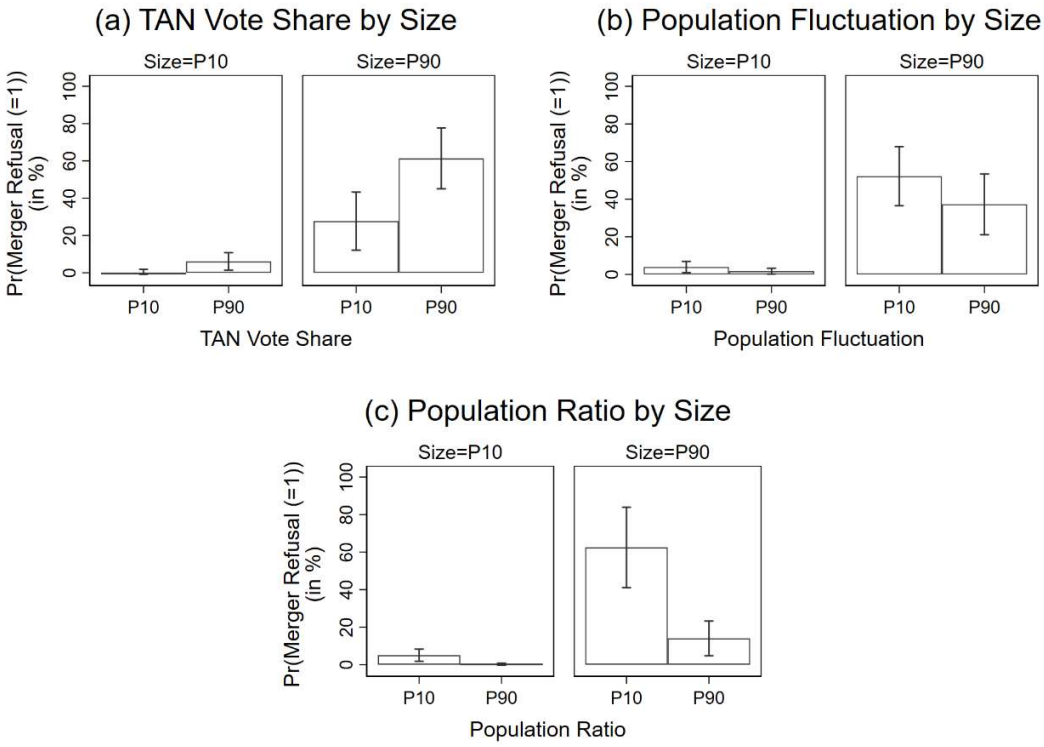

Figure 3. Size and Self-Determination
Note. Predicted probabilities are based on multilevel logistic regression model (6) from Table B.4 (Online Appendix); all other variables are held constant at their mean. Municipality Size: P10=130 inhabitants, P90=2,230 inhabitants. TAN Vote share: P10=.15, P90=.46; Population Fluctuation: P10=.09, P90=.22 Population Ratio: P10=.05, P90=.75.

To corroborate this finding further, I a.) conduct subgroup analyses for small and large municipalities, and b.) estimate interaction effects between population size and the three self-determination variables. The subgroup analysis confirms the results from figure 2. (see table B.5 and figure B.2 in the Online Appendix). While the coefficients for the self-determination indicators are small and insignificant for small municipalities, they are more pronounced and – in the case of TAN vote share and population ratio – also statistically significant for large municipalities. This corroborates the finding that only when functional pressures, here in the form of smallness, are not too prevalent, do concerns for self-determination become relevant for voters' decisions on merger projects.

In addition to these subgroup analyses, we can also estimate interaction effects of municipality size and the three self-determination indicators. We would expect that the interaction effect points in the same direction as the coefficient of the respective indicator for self-determination. When this is the case, the effect of the self-determination indicator gets more pronounced as municipality size increases – which corresponds to what we have observed so far. Table 3 contains results for both a multilevel logistic regression model and for a linear probability model.[15] While the coefficients for the interaction terms are not significant – except for the interaction between size and population ratio – we can see that they all point in the expected direction: the effect of self-determination concerns tends to increase as municipality size increases.

[15] I report a linear probability model here as a robustness check, since the significance and the size of the marginal effects of interaction terms in logistic regression models depend on the values of the covariates in the model (Ai and Norton 2003). The log-odds of the interaction effect (reported for the multilevel logistic regression models in Table 3) are not affected by this problem, however. Graphs illustrating the interaction effects from the multilevel logistic regression models and from the linear probability models can be found in Figure C.1 and C.2 in Online Appendix C.

Table 3. Interaction Models: Size x Self-Determination

	MLL[a]			LPM[b]		
	(1)	(2)	(3)	(4)	(5)	(6)
Log. Population	1.526***	1.592***	1.667***	0.114***	0.121***	0.123***
	(0.307)	(0.307)	(0.303)	(0.024)	(0.024)	(0.023)
TAN Vote Share	5.768**			0.553***		
	(1.982)			(0.167)		
Population Fluctuation		-6.777			-0.493	
		(3.548)			-0.27	
Population Ratio			-2.339			-0.244*
			(1.210)			(0.108)
Log. Population x TAN Vote Share	1.878			0.226		
	(1.509)			(0.120)		
Log. Population x Population Fluctuation		-0.585			-0.189	
		(3.188)			(0.204)	
Log. Population x Population Ratio			-2.028**			-0.150**
			(0.688)			(0.050)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Canton FEs	Yes	Yes	Yes	Yes	Yes	Yes
Time Period FEs	Yes	Yes	Yes	Yes	Yes	Yes
Log. Lik.	-168.60	-169.38	-164.40	-149.25	-150.65	-146.41
AIC	385	387	377	347	349	341
BIC	488	490	480	449	452	444

Note. *p<.05 **p<.01 ***p<.001. N level-1 (Municipalities)=541, N level-2 (Merger Projects)=166. [a]MLL=Multilevel Logistic Regression Models. [b]LPM=Linear Probability Models. Log. Population, TAN Vote Share, Population Fluctuation, and Population Ratio are centered at the median to obtain meaningful baseline coefficients of the interacted variables. Coefficients are log-odds for the multilevel logistic regression models and OLS coefficients for the linear probability models.

In sum, based on the results and the different tests reported here, we can clearly corroborate hypothesis H_{1b}: larger municipalities are more likely to vote against a merger project. In addition, we can partially corroborate hypotheses H_{2a} and H_{2c}: large municipalities with a higher TAN vote share and with a smaller relative size in the merger coalition are more likely to vote against a merger project. While there's evidence for hypothesis H_{2b} as well, the coefficient for population fluctuation comes with large confidence intervals and is not statistically significant in three of the four specifications reported here. We thus reject hypothesis H_{2b}.

6. Discussion

What role do functional pressures and concerns for political self-determination play in voluntary municipal mergers referenda? In this analysis of 541 municipalities involved in 166 different merger projects in three Swiss cantons, voters of every seventh municipality rejected a merger project initiated by their local representatives in a local referendum. Larger municipalities are particularly prone to reject merger proposals. Moreover, municipalities with strong right-wing parties and municipalities that would lose political influence as a result of a merger are more likely to vote against a merger project. These findings are in line with existing research on local government amalgamation – potential scale economy benefits have been found to matter for decisions in Japanese (Miyazaki 2014) and Swiss (Strebel 2018) local merger referenda. In addition, concerns for political control are associated with municipal mergers in a variety of different contexts (Marando and Whitley 1972; Hyytinen, Saarimaa, and Tukiainen 2014; Jakobsen and Kjaer 2016; Strebel 2018). This in turn suggests that the findings of this study might be generalizable to other contexts in which local referenda on municipal mergers are held, such as Finland, Japan and the US.

This study suggests that functional pressures and concerns for self-determination are interdependent: only in municipalities that are sufficiently large, voters are led by concerns for self-determination. In small municipalities, the vote share of right-wing parties and a municipality's population share in a merger coalition is not associated with the probability to reject a merger in a popular vote. This has implications for the prominent contention that functional pressures are subordinate to concerns for self-determination as stated in the postfunctionalist theory of governance (Hooghe and Marks

2016). It seems that this is only true for some municipalities, namely those that are not subject to overwhelming functional pressures to amalgamate.

This study has several limitations. First, we cannot draw any inferences about individual decision-making processes from this contextual analysis. For example, we don't know whether right-wing party supporters are more likely to reject merger projects. However, the claims made don't operate at the individual level. Rather, it is the context, the presence of a strong right-wing party mobilizing against a merger project, that affects local constituencies' decisions. Second, the dependent variable only indicates whether or not a merger project was rejected by local constituencies, not how strong this rejection was. Data on the strength of the merger rejection in a particular municipality is not available for the cases at hand. What matters substantively, however, is whether a municipality rejected a merger project, not whether 51% or 80% of the voters did. Finally, the rejection of merger projects often hinges on other, more idiosyncratic, factors that cannot be considered in this study. For example, historical animosities between two municipalities might drive merger rejection in some cases. This study can only offer a 'birds-eye view' of factors that on average increase or decrease merger rejection probability; it can't provide a detailed assessment of individual cases.

Future research should, therefore, investigate whether the factors associated with merger rejection here operate in a similar way in other contexts and whether individual-level behavior corresponds to the assumptions made here. For the case at hand, merger decisions at the aggregate level largely seem to hinge on functional pressures in the form of small size and on concerns for self-determination in municipalities less exposed to such functional pressures.

For policy-makers promoting municipal merger projects this has differentiated implications. For those advocating the merger of very small municipalities (<500 inhabitants), emphasis on functional pressures municipalities face due to their smallness and how they might be alleviated through mergers seem to be sufficient. The task of policy-makers in larger municipalities (> 500 inhabitants) seems to be more complex. Resorting to a discourse of scale economies is not sufficient here. Rather, they have to take concerns for self-determination seriously. For one, they could avoid entering merger coalitions with municipalities substantively bigger than their own. Second, these concerns could be taken up by granting the smaller parts of the new municipality a fixed number of seats in the new local council or executive – thereby ensuring the continued local representation of these constituencies.

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Appendix

A. Details on Financial Incentives in the Three Cantons

All three cantons studied here all incite mergers financially. Between 2000 and 2017, Fribourg has implemented two different schemes for inciting mergers, one that was limited for the period 2000 to 2006 and a second one that is in place since 2012 (but applies to mergers ex post facto that came into force in 2011). The laws from the cantons Bern and Vaud are in place since 2005 but can be applied ex post facto to mergers that came into force from 2003 onwards. The basic formula for calculating the financial incentive as of now is the same across the three cantons and looks as follows

$$\text{Lump-sum payment}_{\text{BE, FR, VD}} = \sum_{i=1}^{n} (x_i * a) * \left(1 + \frac{n-2}{10}\right)$$

where x_i refers to the population size of a municipality participating in a merger project, n is the total number of municipalities in a merger project, and a refers to the number of Swiss francs per capita in case a merger project is implemented (400 for Bern, 200 for Fribourg and 250 for Vaud). In all three cantons, municipalities that have merged already since the incentive is in place are not considered in the calculation of the incentive if they merge again.

Besides these basic similarities, there are also some differences across cantons. Bern and Vaud have defined a maximum population size for each municipality that is considered for the calculation (1,000 in Bern and 1,500 in Vaud). Furthermore, Vaud only considers up to 3,000 inhabitants in total for the calculation. In Fribourg there's neither an overall nor an individual size ceiling for the incentive calculation. The formula for calculating the financial incentive in Fribourg for the period 2000-2006 looks as follows

$$\text{Lump-sum payment}_{\text{FR}} = \sum_{i=1}^{n} \left(x_i * a * \frac{1}{c} \right)$$

where x_i again refers to the size of an individual municipality, n designates the total number of municipalities involved in a merger project, a amounts to 400 Swiss francs, and c is an index for the economic wellbeing of a municipality, where 1 refers to the mean and higher values to more economic wellbeing. A maximum number of 1,500 inhabitants per municipality are considered for the calculation.

Online Appendix

B. Tables and Figures

Table B.1: Descriptive Statistics

Variable	N	Mean	SD	Min	Max	P25	P50	P75
Merger Rejection (=1)	541	0.15	0.35	0	1	0	0	0
Debt/Capita (1000 CHF)	541	0.09	4.01	-10.88	22.72	-2.47	-0.14	2.21
Tax Rate	541	1.08	0.44	0.5	2.7	0.78	0.9	1.25
Log. Population	541	6.2	1.15	3.47	10.21	5.47	6.02	6.99
Population (End of Year)	541	1039.74	1986.69	32	27101	237	413	1086
TAN Vote Share	541	0.3	0.13	0.01	0.81	0.22	0.28	0.38
Population Fluctuation	541	0.16	0.06	0	0.49	0.12	0.15	0.19
Population Ratio	541	0.31	0.26	0.01	0.99	0.09	0.22	0.44
Δ Tax Rate	541	0	0.08	-0.33	0.32	-0.05	0	0.05
Δ Debt/Capita (1000 CHF)	541	0	2.59	-11.32	14.02	-1.44	-0.06	1.35
Δ TAN Vote Share	541	0.05	0.05	0	0.4	0.02	0.04	0.07
Δ Left Vote Share	541	0.04	0.03	0	0.28	0.01	0.03	0.05
Payment/Capita (100 CHF)	535	3.86	1.99	0	8.89	2.2	4	5.19
Previous Merger Attempt								
None	541	0.86	0.35	0	1	1	1	1
Previous Merger Success	541	0.05	0.22	0	1	0	0	0
Previous Merger Failed	541	0.09	0.29	0	1	0	0	0
Parliament (=1)	541	0.12	0.32	0	1	0	0	0
>2 Municipalities	541	0.71	0.45	0	1	0	1	1
Canton								
Bern	541	0.25	0.43	0	1	0	0	1
Fribourg	541	0.44	0.5	0	1	0	0	1
Vaud	541	0.31	0.46	0	1	0	0	1
Time Period								
2000-2002	541	0.07	0.26	0	1	0	0	0
2003-2005	541	0.22	0.41	0	1	0	0	0
2006-2008	541	0.08	0.27	0	1	0	0	0
2009-2011	541	0.19	0.39	0	1	0	0	0
2012-2014	541	0.23	0.42	0	1	0	0	0
2015-2017	541	0.21	0.41	0	1	0	0	0

Table B.2. Merger Rejection vs. Merger Acceptance

Variable	Merger Rejection			Merger Acceptance			Δ Mean	
	N	Mean	SD	N	Mean	SD		
Debt/Capita (1000 CHF)	79	0.01	4.09	462	0.1	4	0.08	n.s.
Tax Rate	79	1.16	0.53	462	1.06	0.42	-0.1	*
Population	79	1301.37	1408.57	462	995.01	2067.33	-306.36	n.s.
TAN Vote Share	79	0.32	0.1	462	0.29	0.13	-0.03	*
Population Fluctuation	79	0.15	0.04	462	0.16	0.06	0.01	n.s.
Population Ratio	79	0.29	0.21	462	0.31	0.27	0.01	n.s.
Δ Tax Rate	79	-0.02	0.08	462	0	0.08	0.02	*
Δ Debt/Capita (1000 CHF)	79	0.3	2.83	462	-0.05	2.55	-0.35	n.s.
Δ TAN Vote Share	79	0.05	0.04	462	0.05	0.05	0	n.s.
ΔLeft Vote Share	79	0.03	0.03	462	0.04	0.03	0.01	*
Payment/Capita (100 CHF)	76	3.36	1.75	459	3.94	2.02	0.57	**
Previous Merger Failed	79	0.01	0.11	462	0.11	0.31	0.09	**
Previous Merger Success	79	0.08	0.27	462	0.05	0.21	-0.03	n.s.
>2 Municipalities	79	0.84	0.37	462	0.69	0.46	-0.15	**
Parliament (=1)	79	0.19	0.39	462	0.1	0.31	-0.09	*

Note. One-sided t-tests, n.s.=not significant, $^{*}p<.05$, $^{**}p<.01$.

Table B.3. Failed vs. Successful Merger Projects

Variable	Failed Projects			Successful Projects			Δ Mean	
	N	Mean	SD	N	Mean	SD		
Share Rejecting Municipalities	50	0.43	0.17	116	0	0		
Mean N Municipalities	50	3.88	1.88	116	2.99	1.63	0.89	**
Mean Debt/Capita (1000 CHF)	50	-0.02	3.27	116	0.18	3.41	-0.2	n.s.
Mean Tax Rate	50	1.13	0.49	116	1.12	0.42	0.01	n.s.
Mean Population Size	50	1206.66	942.27	116	1237.13	1868.7	-30.47	n.s.
Mean TAN Vote Share	50	0.31	0.09	116	0.29	0.12	0.01	n.s.
Mean Population Fluctuation	50	0.16	0.04	116	0.15	0.04	0.01	n.s.
SD Population Size	50	795.1	781.75	116	1301.64	2455.42	-506.54	n.s.
SD Tax Rate	50	0.08	0.05	116	0.08	0.08	0	n.s.
SD Debt/Capita (1000 CHF)	50	2.48	1.62	115	2.25	1.91	-0.23	n.s.
SD TAN Vote Share	50	0.06	0.04	116	0.07	0.06	-0.01	n.s.
SD Left Vote Share	50	0.04	0.03	116	0.05	0.04	-0.01	n.s.
Mean Payment/Capita (100 CHF)	48	3.34	1.63	116	3.57	1.87	-0.23	n.s.

Note. One-sided t-tests, n.s.=not significant, $^{**}p<.01$.

Table B.4 Multilevel Logit Models for Merger Rejection (=1)

	(1)	(2)	(3)	(4)	(5)	(6)
Debt/Capita	0.045		0.052		0.075	0.118
(1000 CHF)	(0.044)		(0.046)		(0.079)	(0.086)
Tax Rate	0.119		-1.159		0.474	0.291
	(1.043)		(1.064)		(1.303)	(1.262)
Log.	0.495***		1.451***			1.487***
Population	(0.139)		(0.257)			(0.308)
TAN Vote		1.526	4.677**		4.183*	6.445**
Share		(1.591)	(1.727)		(1.878)	(1.980)
Population		-2.685	-5.575		-5.481	-6.965*
Fluctuation		(2.800)	(3.263)		(3.086)	(3.467)
Population		0.213	-4.382***		-0.084	-4.182***
Ratio		(0.596)	(1.028)		(0.805)	(1.196)
Δ Tax Rate				-3.240	-4.308	-4.587*
				(1.736)	(2.249)	(2.302)
Δ Debt/Capita				0.079	0.021	-0.040
(1000 CHF)				(0.054)	(0.097)	(0.106)
Δ TAN Vote				-4.038	-6.813	-5.801
Share				(3.941)	(4.096)	(4.261)
Δ Left Vote				-7.730	-6.916	-4.145
Share				(5.959)	(6.093)	(6.382)
Payment/Capita				-0.189	-0.229	0.082
(100 CHF)				(0.122)	(0.121)	(0.127)
Previous Merger Attempt (B=None)						
Merger Attempt				-2.100	-2.022	-2.167*
Failed				(1.106)	(1.118)	(1.106)
Merger Attempt				0.492	0.468	0.481
Succeeded				(0.615)	(0.642)	(0.631)
>2				1.361**	1.479**	0.739
Municipalities				(0.473)	(0.528)	(0.546)
Parliament				0.696	1.144*	0.164
(=1)				(0.463)	(0.535)	(0.560)
Constant	-6.085*	-2.651*	-8.439**	-2.239*	-3.307	-12.295***
	(2.571)	(1.117)	(2.725)	(1.008)	(2.930)	(3.517)
Variance	1.162	1.431	0.833	0.949	0.769	0.425
(Constant)	(0.596)	(0.663)	(0.564)	(0.557)	(0.513)	(0.421)
Canton FEs	Yes	Yes	Yes	Yes	Yes	Yes
Time Period Fes	Yes	Yes	Yes	Yes	Yes	Yes
Log. Lik.	-203.33	-209.60	-188.20	-187.45	-182.48	-168.48
χ^2	21.77	10.41	39.14	32.99	39.71	52.71
$p>\chi^2$	0.016	0.405	0.000	0.007	0.008	0.000
AIC	431	443	406	411	411	385
BIC	482	495	471	488	509	488

Note. *p<.05 **p<.01 ***p<.001. Cell entries are log odds obtained through -meqrlogit- command in Stata. Standard errors in parentheses. N level-1 (Municipalities)=541, N level-2 (Merger Projects)=166.

Table B.5 Multilevel Logit Models for Merger Rejection (=1)

	Population Size ≤ P50	Population Size > P50
Debt/Capita (1000 CHF)	0.112	0.060
	(0.194)	(0.104)
Tax Rate	-4.054	1.023
	(4.219)	(1.496)
TAN Vote Share	3.065	7.036**
	(4.100)	(2.524)
Population Fluctuation	-8.832	-8.834
	(6.176)	(5.100)
Population Ratio	3.787	-2.543*
	(3.042)	(1.025)
Δ Tax Rate	4.172	-9.447**
	(5.874)	(3.109)
Δ Debt/Capita (1000 CHF)	0.143	-0.108
	(0.233)	(0.117)
Δ TAN Vote Share	-6.875	-2.169
	(8.254)	(5.690)
Δ Left Vote Share	-18.920	-1.971
	(13.913)	(7.896)
Payment/Capita (100 CHF)	-0.019	-0.231
	(0.372)	(0.138)
Previous Merger Attempt (B=None)		
Merger Attempt Failed	-17.682	-1.606
	(1732.281)	(1.110)
Merger Attempt Succeeded		0.072
		(0.627)
>2 Municipalities	2.734	0.868
	(1.640)	(0.602)
Parliament (=1)	21.911	0.915
	(4593.925)	(0.606)
Constant	5.243	-3.146
	(7.787)	(3.692)
Variance (Constant)	4.511	0.000
	(3.911)	(0.000)
Canton FEs	Yes	Yes
Time Period FEs	Yes	Yes
N level-1 (Municipalities)	278	257
N level-2 (Merger Projects)	130	137
Log. Lik.	-58.44	-103.01
χ^2	9.49	37.59
$p>\chi^2$	0.977	0.014
AIC	161	252
BIC	241	334

Note. *p<.05 **p<.01. Cell entries are log odds obtained through -meqrlogit- command in Stata. Standard errors in parentheses.

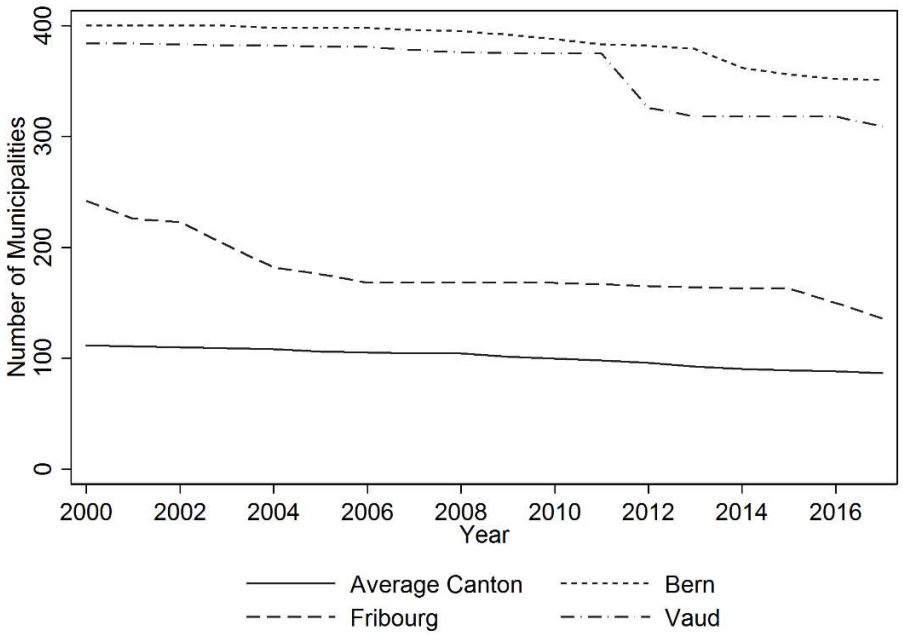

Figure B.1. Development of Municipality Number
Note. Data source: Swiss Federal Statistical Office.

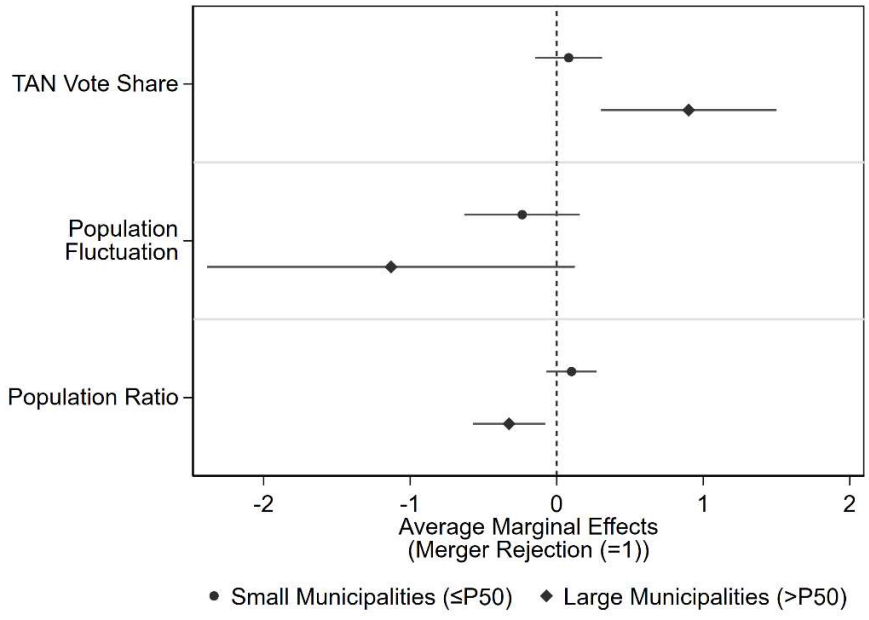

Figure B.2. Coefficient Plot: Small vs. Large Municipalities
Note. Predicted probabilities are based on multilevel logistic regression models from

Table B.5; all other variables are held constant at their mean. Municipality Size: P50=410 inhabitants.

C. Robustness Checks

Table C.1 Linear Probability Models for Merger Rejection (=1)

	(1)	(2)	(3)	(4)	(5)	(6)
Debt/Capita	0.004		0.005		0.008	0.008
(1000 CHF)	(0.004)		(0.004)		(0.007)	(0.006)
Tax Rate	0.076		-0.035		0.094	0.117
	(0.104)		(0.104)		(0.126)	(0.123)
Log.	0.057***		0.135***			0.119***
Population	(0.014)		(0.020)			(0.024)
TAN Vote		0.136	0.419**		0.360*	0.476**
Share		(0.159)	(0.158)		(0.164)	(0.162)
Population		-0.197	-0.363		-0.382	-0.407
Fluctuation		(0.269)	(0.260)		(0.262)	(0.256)
Population		-0.007	-0.408***		-0.054	-0.380***
Ratio		(0.060)	(0.083)		(0.077)	(0.099)
Δ Tax Rate				-0.328	-0.504*	-0.534*
				(0.184)	(0.230)	(0.225)
Δ Debt/Capita				0.008	0.001	-0.000
(1000 CHF)				(0.006)	(0.009)	(0.008)
Δ TAN Vote				-0.486	-0.719*	-0.633
Share				(0.348)	(0.362)	(0.354)
Δ Left Vote				-0.574	-0.472	-0.067
Share				(0.480)	(0.482)	(0.478)
Payment/Capita				-0.018	-0.020*	0.002
(100 CHF)				(0.010)	(0.010)	(0.011)
Previous Merger Attempt (B=None)						
Merger Attempt				-0.108*	-0.096	-0.113*
Failed				(0.053)	(0.054)	(0.053)
Merger Attempt				0.029	0.038	0.027
Succeeded				(0.070)	(0.072)	(0.070)
>2				0.130***	0.122**	0.043
Municipalities				(0.038)	(0.042)	(0.044)
Parliament				0.097	0.150**	0.051
(=1)				(0.051)	(0.057)	(0.059)
Constant	-0.355	0.145	-0.513*	0.197*	0.027	-0.713*
	(0.242)	(0.094)	(0.246)	(0.080)	(0.258)	(0.291)
Cantons FEs	Yes	Yes	Yes	Yes	Yes	Yes
Time Period FEs	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.043	0.013	0.092	0.067	0.076	0.119
F	3.44	1.7	5.19	3.38	3.1	4.27
(Vars, DF)	(10, 530)	(10, 530)	(13, 527)	(16, 518)	(21, 513)	(22, 512)
p>F	0.000	0.078	0.000	0.000	0.000	0.000

Note. *p<.05 **p<.01 ***p<.001. Cell entries are OLS estimates obtained through -regress- command in Stata. Standard errors in parentheses. N Municipalities=541.

Table C.2 Logit Models with Clustered Standard Errors for Merger Rejection (=1)

	(1)	(2)	(3)	(4)
Debt/Capita (1000 CHF)	0.040			0.127
	(0.049)			(0.106)
Tax Rate	0.596			0.227
	(0.917)			(1.061)
Log. Population	0.471***			1.413***
	(0.109)			(0.310)
TAN Vote Share		1.104		6.454**
		(1.301)		(1.969)
Population Fluctuation		-1.868		-6.762**
		(1.828)		(2.490)
Population Ratio		-0.041		-3.941**
		(0.427)		(1.240)
Δ Tax Rate			-2.809*	-4.275*
			(1.350)	(1.845)
Δ Debt/Capita (1000 CHF)			0.070	-0.055
			(0.055)	(0.123)
Δ TAN Vote Share			-3.539	-5.411
			(3.147)	(3.679)
Δ Left Vote Share			-8.139	-4.284
			(5.631)	(6.515)
Payment/Capita (100 CHF)			-0.183	0.058
			(0.128)	(0.115)
Previous Merger Attempt (B=None)				
Merger Attempt Failed			-2.052	-2.123
			(1.057)	(1.092)
Merger Attempt Succeeded			0.262	0.366
			(0.533)	(0.582)
>2 Municipalities			1.312**	0.820
			(0.420)	(0.497)
Parliament (=1)			0.685	0.161
			(0.397)	(0.518)
Constant	-6.312**	-1.957	-1.823*	-11.689***
	(2.195)	(1.013)	(0.765)	(3.053)
Canton FEs	Yes	Yes	Yes	Yes
Time Period FEs	Yes	Yes	Yes	Yes
Log. Lik.	-208.27	-216.67	-190.66	-169.32
χ^2	30.22	11.27	50.85	91.16
$p>\chi^2$	0.001	0.337	0.000	0.000
AIC	439	455	415	385
BIC	486	503	488	483

Note. $^{*}p<.05$ $^{**}p<.01$ $^{***}p<.001$. Cell entries are log odds obtained through -logit- command in Stata. Merger project clustered standard errors in parentheses. N Municipalities=541, N Clusters (Merger Projects)=166.

Table C.3 Logit Models with Robust Standard Errors for Merger Rejection (=1)

	(1)	(2)	(3)	(4)
Debt/Capita (1000 CHF)	0.040			0.127
	(0.042)			(0.098)
Tax Rate	0.596			0.227
	(0.836)			(1.152)
Log. Population	0.471***			1.413***
	(0.104)			(0.316)
TAN Vote Share		1.104		6.454***
		(1.186)		(1.927)
Population Fluctuation		-1.868		-6.762*
		(1.737)		(2.668)
Population Ratio		-0.041		-3.941**
		(0.410)		(1.211)
Δ Tax Rate			-2.809	-4.275*
			(1.506)	(2.024)
Δ Debt/Capita			0.070	-0.055
(1000 CHF)			(0.054)	(0.128)
Δ TAN Vote Share			-3.539	-5.411
			(2.966)	(3.898)
Δ Left Vote Share			-8.139	-4.284
			(5.542)	(6.426)
Payment/Capita			-0.183*	0.058
(100 CHF)			(0.093)	(0.094)
Previous Merger Attempt				
(B=None)				
Merger Attempt Failed			-2.052*	-2.123*
			(1.025)	(1.017)
Merger Attempt			0.262	0.366
Succeeded			(0.548)	(0.616)
>2 Municipalities			1.312**	0.820
			(0.410)	(0.492)
Parliament (=1)			0.685	0.161
			(0.385)	(0.546)
Constant	-6.312**	-1.957*	-1.823*	-11.689***
	(2.013)	(0.836)	(0.834)	(3.185)
Canton FEs	Yes	Yes	Yes	Yes
Time Period FEs	Yes	Yes	Yes	Yes
Log. Lik.	-208.27	-216.67	-190.66	-169.32
χ^2	32.67	19.56	47.00	69.35
$p>\chi^2$	0.000	0.034	0.000	0.000
AIC	439	455	415	385
BIC	486	503	488	483

Note. *p<.05 **p<.01 ***p<.001. Cell entries are log odds obtained through -logit- command in Stata. Robust standard errors in parentheses. N Municipalities=541.

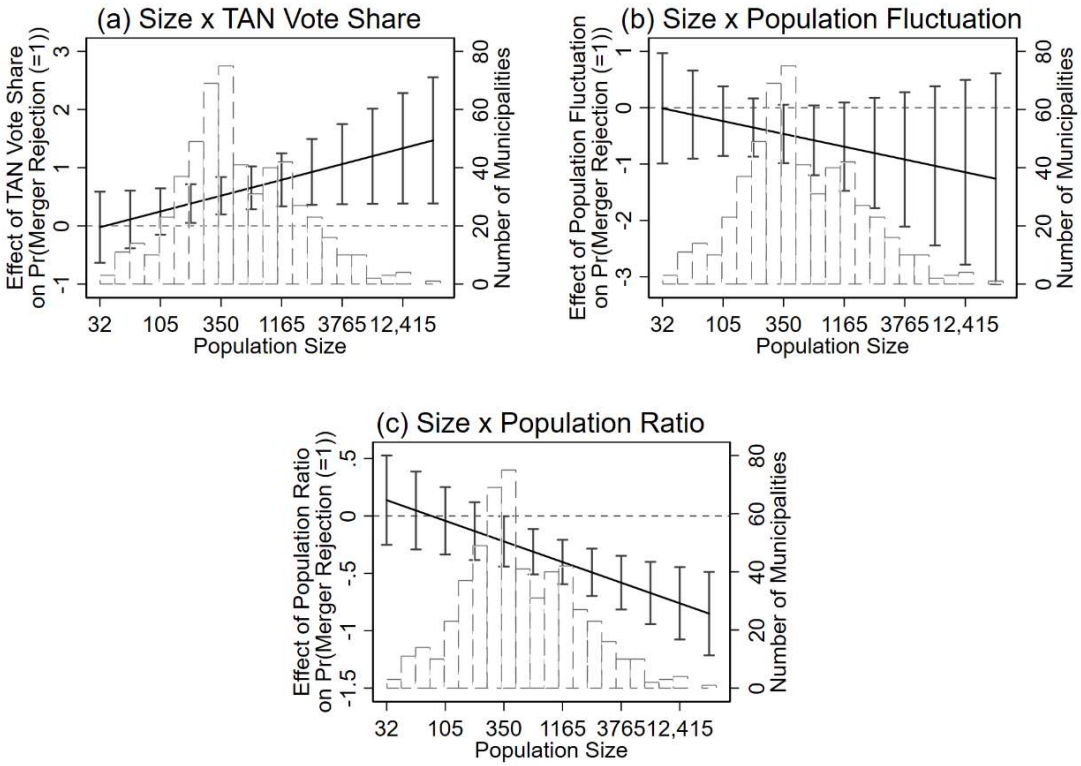

Figure C.1 Size x Self-Determination Interaction: Linear Probability Models
Note. Predicted probabilities are based on multilevel logistic regression models (4), (5), and (6) from Table 3; all other variables are held constant at their mean.

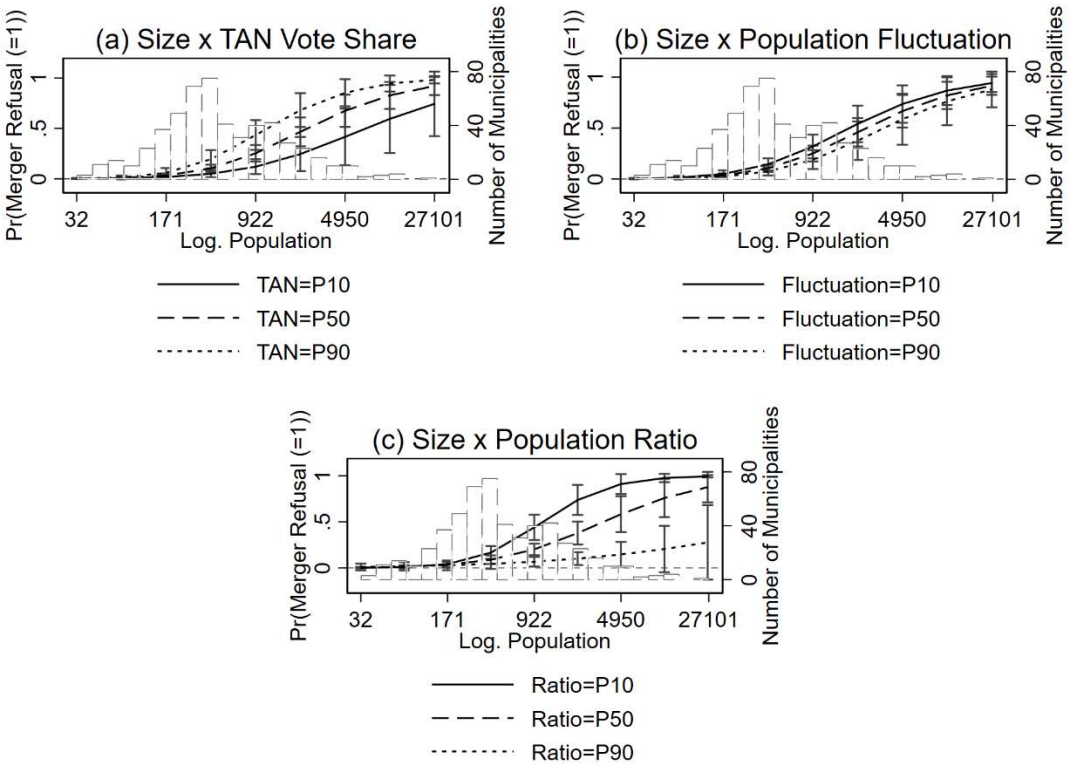

Figure C.2 Size x Self-Determination Interaction: Multilevel Logistic Regression Models *Note.* Predicted probabilities are based on multilevel logistic regression models (1), (2), and (3) from Table 3; TAN vote share, population fluctuation, and population ratio at 10th, 50th, and 90th percentile; all other variables are held constant at their mean.